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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/635,280	08/09/2000	RAINER H. WISCHINSKI	SAA-34-2	4936
23569	7590	01/04/2005	EXAMINER	
SQUARE D COMPANY INTELLECTUAL PROPERTY DEPARTMENT 1415 SOUTH ROSELLE ROAD PALATINE, IL 60067			LAZARO, DAVID R	
			ART UNIT	PAPER NUMBER
			2155	

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/635,280

Applicant(s)

WISCHINSKI, RAINER H.

Examiner

David Lazaro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17,19-21 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17,19-21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06/28/04, 10/28/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the amendment filed 08/16/04.
2. Claims 1-3, 12-17, 21 and 23 were amended.
3. Claims 18 and 22 were canceled.
4. Claims 1-17, 19-21 and 23 are pending in this Office Action.

Response to Amendment

5. The objection to the drawings is withdrawn.
6. The rejection of Claims 1, 12, 17 and 21 under 35 USC §112, first paragraph (written description), is withdrawn.
7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

Information Disclosure Statement

8. The information disclosure statement (IDS) submitted on 06/28/04 has been considered by the examiner.
9. The information disclosure statement filed 10/28/04 contains references that fail to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but some of the information referred to therein has not been considered. Specifically, the

following references have not been considered: EP 0917034 A1, DE 19615190 A1, 2785122 (France).

Claim Objections

10. Claim 21 is objected to because of the following informalities: In the last 2 lines, "at a time" should be "at a boot time". Since this seems to just be a typographical error, the examiner will interpret Claim 21 in view of the corrected phrase. Appropriate correction is required.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1, 2, 4-6, 8, 9, 12, 13, 15, 17, 19, 20, 21 and 23 rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,909,386 by Nixon et al. (Nixon).

13. With respect to Claim 1, Nixon teaches A control system (Col. 2 lines 8-10 and Col. 6 lines 45-58), comprising: an automation device operably connected to a network (Col. 7 lines 18-45); a network device operably connected to the network (Col. 7 lines 5-17); and, a customized application program for the automation device stored in the network device (Col. 5 lines 17-21 and Col. 7 lines 8-17 and Col. 23 lines 46-55), wherein the customized application program controls the automation device (Col. 7 lines

18-25), wherein the customized application program is selected by the network device in response to an application program request message received at the network device (Col. 28 lines 35-43 and See Fig. 17 steps 1624-1628) and sent from the automation device (Col. 28 lines 31-44 and See Fig. 17 steps 1624-1628), as part of a bootstrap protocol (Col. 27 line 66 - Col. 8 line 4), and wherein the customized application program is downloaded to the automation device at a boot time of the automation device (Col. 28 lines 35-43 and Col. 27 line 66 - Col. 8 line 24).

14. With respect to Claim 2, Nixon teaches all the limitations of Claim 1 and further teaches the customized application program comprises an executive code and a user code (Col. 23 lines 5-17 and lines 34-45 and Col. 24 lines 4-26).

15. With respect to Claim 4, Nixon teaches all the limitations of Claim 1 and further teaches the automation device is a programmable logic controller (Col. 7 lines 5-24).

16. With respect to Claim 5, Nixon teaches all the limitations of Claim 1 and further teaches the network device is a server (Col. 7 lines 5-17).

17. With respect to Claim 6, Nixon teaches all the limitations of Claim 5 and further teaches the server has a TCP/IP protocol stack (Col. 17 lines 15-21 and Col. 18 lines 30-40).

18. With respect to Claim 8, Nixon teaches all the limitations of Claim 1 and further teaches the network is Ethernet (Col. 6 lines 45-57).

19. With respect to Claim 9, Nixon teaches all the limitations of Claim 1 and further teaches the network is Profibus (Col. 7 lines 25-34).

20. With respect to Claim 12, Nixon teaches A method of operating a control system on a network (Col. 2 lines 8-10 and Col. 6 lines 45-58) comprising the steps of: providing a network device for storing a customized application program to be executed on an automation device (Col. 5 lines 17-21 and Col. 7 lines 8-17 and Col. Col. 23 lines 46-55); transmitting a message for requesting a network address for the automation device (Col. 28 lines 15-24); transmitting a message for requesting the customized application program for the automation devices (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628) as part of a bootstrap protocol (Col. 27 line 66 - Col. 8 line 4); selecting the customized application program in response to the message for requesting the customized application program (Col. 28 lines 35-43 and See Fig. 17 steps 1624-1628); transmitting the customized application program to the automation device (Col. 28 lines 35-43 and See Fig. 17 steps 1624-1628); and installing the customized application program on the automation device (Col. 28 lines 35-43 and See Fig. 17 steps 1624-1628) at a boot time of the automation device (Col. 27 line 66 - Col. 8 line 4).

21. With respect to Claim 13, Nixon teaches all the limitations of Claim 12 and further teaches the step of executing the customized application program on the automation device (Col. 7 lines 18-24).

22. With respect to Claim 15, Nixon teaches all the limitations of Claim 12 and further teaches wherein the customized application program further comprises: an executive program code for the automation device (Col. 23 lines 5-17 and lines 34-45 and Col. 24 lines 4-26); and, a user program code for the automation device (Col. 23 lines 5-17 and

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lines 34-45 and Col. 24 lines 4-26), the user program is selected in response to the message requesting the customized application program (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628).

23. With respect to Claim 17, Nixon teaches a network control system (Col. 2 lines 8-10 and Col. 6 lines 45-58), comprising: means for operably connecting a network device to the network control system (Col. 7 lines 8-17), the network device stores a customized application program for controlling an automation device (Col. 5 lines 17-21 and Col. 7 lines 8-17 and Col. 23 lines 46-55); means for transmitting a message requesting a network address (Col. 28 lines 15-24); means for transmitting a message requesting the customized application program (Col. 28 lines 31-44 and See Fig. 17 steps 1624-1628) as part of a bootstrap protocol (Col. 27 line 66 - Col. 8 line 4); means for selecting the customized application program in response to the message requesting the customized application program (Col. 28 lines 35-43 and See Fig. 17 steps 1624-1628); means for transmitting the a customized application program to the automation device; and, means for installing the customized application program (Col. 28 lines 35-43 and See Fig. 17 steps 1624-1628) at a boot time of the automation device (Col. 27 line 66 - Col. 8 line 4).

24. With respect to Claim 19, Nixon teaches all the limitations of Claim 17 and further teaches the automation device is a controller (Col. 7 lines 5-24).

25. With respect to Claim 20, Nixon teaches all the limitations of Claim 17 and further teaches the network device is a server (Col. 7 lines 5-17).

26. With respect to Claim 21, Nixon teaches a method of operating a control system on a network (Col. 2 lines 8-10 and Col. 6 lines 45-58) comprising the steps of: providing a network device for storing a customized application program to be executed on an automation device (Col. 5 lines 17-21 and Col. 7 lines 8-17 and Col. Col. 23 lines 46-55); requesting a network address for the automation device (Col. 28 lines 15-24); requesting the customized application program (Col. 28 lines 31-44 and See Fig. 17 steps 1624-1628) as part of a bootstrap protocol (Col. 27 line 66 - Col. 8 line 4); selecting the customized application program (Col. 28 lines 35-43 and See Fig. 17 steps 1624-1628); transmitting the customized application program to the automation device (Col. 28 lines 35-43 and See Fig. 17 steps 1624-1628); and, installing the customized application program on the automation device (Col. 28 lines 35-43 and See Fig. 17 steps 1624-1628) at a time of the automation device (Col. 27 line 66 - Col. 8 line 4).
27. With respect to Claim 23, Nixon teaches all the limitations of Claim 21 and further teaches selecting a user code for the customized application program (Col. 23 lines 5-17 and lines 34-45 and Col. 24 lines 4-26); and selecting an executive code for the customized application program (Col. 23 lines 5-17 and lines 34-45 and Col. 24 lines 4-26).

Claim Rejections - 35 USC § 103

28. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

29. Claims 3, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nixon in view of "A Customizable Library to support Software Synthesis for Embedded Applications and Micro-Kernel Systems" by Ditze (Ditze).

30. With respect to Claim 3, Nixon teaches all the limitations of Claim 2 but does not explicitly disclose the executive code is selected in response to the user code selected. Ditze teaches the executive code can be selected based on the user code (Page 90, section 3.2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Nixon and modify it as indicated by Ditze such that the system further comprises the executive code is selected in response to the user code selected. One would be motivated to have to this as it would optimize the application program by helping to eliminate run-time and memory overhead (Page 90, section 3.2 first paragraph of Dizte).

31. With respect to Claim 14, Nixon teaches all the limitations of Claim 12 and further teaches the step of selecting the customized application program in response to the request for the customized application program comprises the steps of: identifying the message for requesting the customized application program (Col. 28 lines 31-44 and See Fig. 17 steps 1624-1628); and selecting a user application program in response to the message requesting the application program (Col. 28 lines 31-44 and See Fig. 17 steps 1624-1628), but does not explicitly disclose selecting an executive program in response to the user application program selected. Ditze teaches the executive code can be selected based on the user code (Page 90, section 3.2). It would have been

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obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Nixon and modify it as indicated by Ditze such that the method further comprises selecting an executive program in response to the user application program selected. One would be motivated to have to this as it would optimize the application program by helping to eliminate run-time and memory overhead (Page 90, section 3.2 first paragraph of Ditze).

32. With respect to Claim 16, Nixon teaches all the limitations of Claim 15 but does not teach the executive code is customized in response to the message requesting the application program. Ditze teaches the executive program code is customized to meet the minimum requirements for executing the application program (Page 90, section 3.2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Nixon and modify it as indicated by Ditze such that the executive program code is customized in response to the message requesting the application program to meet the minimum requirements for executing the application program. One would be motivated to have to this as it would optimize the application program by helping to eliminate run-time and memory overhead (Page 90, section 3.2 first paragraph of Ditze).

33. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nixon in view of U.S. Patent 6,236,487 by Stripf et al. (Stripf).

34. With respect to Claim 7, Nixon teaches all the limitations of Claim 1, but does not explicitly disclose the network is Internet. Stripf teaches the Internet can be used as

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part of a control system for automation and controller devices (Col. 1 line 65 - Col. 2 line 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Nixon and modify it as indicated by Stripf such that the network is Internet. One would be motivated to have this as there is need for communications of control programs over large geographical distances (Col. 1 lines 23-34 of Stripf).

35. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nixon.

36. With respect to Claim 10, Nixon teaches all the limitations of Claim 1. Nixon teaches that any network can be used (Col. 6 lines 45-49) but does not explicitly disclose the network using ControlNet. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify system as disclosed by Nixon such that the network is ControlNet. ControlNet offers multiple controllers controlling I/O on the same link. One would be motivated to have this since other networks only allow one master controller on the link.

37. With respect to Claim 11, Nixon teaches all the limitations of Claim 1. Nixon teaches that any network can be used (Col. 6 lines 45-49) but does not explicitly disclose the network using Modbus+. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify system as disclosed by Nixon such that the network is Modbus+. Modbus+ is a standard protocol

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in the automation industry. One would be motivated to use Modbus+ since many industry supplies implement Modbus+ protocol.

Response to Arguments

38. Applicant's arguments filed 08/16/04 have been fully considered. The applicant's arguments are centered on the claimed subject matter regarding the limitations "as part of a bootstrap protocol" and "at a boot time of the automation device" (such as in Claims 1, 12, 17 and 21). While the previously cited art may not disclose these limitations, the Nixon reference teaches these limitations.

Conclusion

39. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

40. U.S. Patent 6,195,591 by Nixon "Process control system using a process control strategy distributed among multiple control elements" February 27, 2001. Same disclosure as the above cited U.S. Patent 5,909,386 also Nixon. Claims the actual bootstrap program for downloading control program code to a controller.

41. U.S. 6,466,972 by Paul et al. "Sever based configuration of network computers via machine classes" October 15, 2002. Discloses the use of configuration components and machine classes where software is installed based on the machine class selected.

42. U.S. Patent 6,308,325 by Dobbek "Apparatus and method for downloading data to electronic device" October 23, 2001. Discloses a download procedure which

discards any data in a download entity not associated to a determined device type.

Installation code is included in the download entity.

43. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is 571-272-3986. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Lazaro
December 22, 2004



BHARAT BAROT
PRIMARY EXAMINER